In re Patent Application of
Ewers
Serial No. **10/681,617**
Filed **10/08/2003**

In the Claims

Please substitute the claims as set forth below in a complete listing. The are no claim amendments made at this time.

1.(original) A vented cap for a pressurized fluid conduit, said cap comprising:

a cap body having a sidewall defining a generally cylindrical inner cavity having a first end and a second end spaced apart therefrom, a mouth defined by a periphery of said sidewall at said first end and opening into said inner cavity, an end wall positioned at said second end so as to close said inner cavity, a plurality of threads positioned along an inner surface of said sidewall and extending generally from said mouth toward said end wall and ending spaced apart therefrom, and at least one lug member extending outwardly from an outer surface of said sidewall and having a lengthwise extent positioned generally parallel to a central axis of said inner cavity, said lug member having a vent slot extending along the lengthwise interior extent of said lug member so that the slot has a first end beginning at said mouth and a second end spaced apart from said end wall, the vent slot extending inwardly from said lug member toward said inner cavity through the sidewall and through the plurality of threads so as to form a vent opening into said inner cavity; and

a gasket having a circumference complementary to the periphery of said inner cavity, said gasket positioned between said plurality of threads and said end wall abuttingly contacting said sidewall and said end wall.

2.(original) The vented cap of claim 1, wherein said at least one lug member has a base coextensive with the outer surface of said sidewall, two lateral walls, and an end wall.

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In re Patent Application of
Ewers
Serial No. **10/681,617**
Filed **10/08/2003**

3.(original) The vented cap of claim 1, wherein said at least one lug member has a base coextensive with the outer surface of said sidewall, two concavely arcuate lateral walls, and a convexly arcuate end wall.

4.(original) The vented cap of claim 1, wherein said vent slot is positioned extending along a central lengthwise dimension of said at least one lug member.

5.(original) The vented cap of claim 1, wherein said plurality of threads is cut along the vent opening to form a bevel having approximately a 45° angle to a center axis of said vent slot.

6.(original) The vented cap of claim 1, wherein an inner surface of said end wall includes a central concavity which extends to form a knob protruding from an exterior surface of said end wall.

7.(original) The vented cap of claim 6, wherein said knob is generally outwardly cylindrical and includes an arcuate groove extending along a lateral circumference.

8.(original) The vented cap of claim 7, further comprising a chain fastened around said arcuate groove.

9.(original) The vented cap of claim 1, wherein said end wall further comprises a shelf positioned peripherally along an inner surface of said end wall, the shelf being slightly raised above a central area of the inner surface of said end wall.

10.(original) The vented cap of claim 1, wherein said gasket seal is circular, having an inner diameter, an outer diameter, and a generally rectangular cross-section.

11.(original) The vented cap of claim 10, wherein the generally rectangular cross-section includes a length lying along a radius of said Gasket.

12.(original) The vented cap of claim 11, wherein the generally rectangular cross-section includes a height sufficient for an upper surface of the Gasket to be positioned approximately level with the second end of said vent slot.

13.(original) A vented cap for a threaded conduit carrying a fluid under pressure, said cap comprising:

a cap body having at least one external lug, a central cap cavity and a plurality of threads peripheral thereto and complementary to said threaded conduit;

a slot cut within the at least one lug, said slot extending from the lug inwardly toward a central axis of the cap so as to communicate with a cap mouth opening and with said central cap cavity, said slot having a blind end terminating within the lug and spaced apart from a closed end of said cap; and

a gasket positioned around a periphery of the central cap cavity at the closed end of said cap so as to prevent communication between the blind end of said vent opening and said central cap cavity when the cap is positioned sufficiently tightened onto said conduit.

14.(original) The vented cap of claim 13, wherein said slot is positioned extending along a central lengthwise dimension of said at least one lug member.

15.(original) The vented cap of claim 13, wherein said plurality of threads is cut along the slot to form a bevel having approximately a 45° angle to a center axis of said vent slot.

16.(original) The vented cap of claim 13, further comprising a knob protruding from an exterior surface of a cap end wall.

17.(original) The vented cap of claim 16, wherein said knob is generally outwardly cylindrical and includes a groove extending along a lateral circumference.

18.(original) The vented cap of claim 17, further comprising a chain fastened around said groove.

19.(original) A vented cap and fitting combination for a fluid conduit, said combination comprising:

a fitting having a generally hollow cylindrical body having an anterior opening including a plurality of threads on an outside surface adjacent said anterior opening, and a posterior opening connectable to said conduit; and

a cap having a generally hollow cylindrical body having an inner cavity therein, an anterior opening including plurality of threads on an inside surface adjacent said anterior opening, a posterior end closed by an end wall, and a plurality of lugs extending outwardly from said body, each lug member of said plurality having a vent slot extending at least partly through the lengthwise interior extent of said lug member so that the vent slot has a first end beginning at said anterior opening and a second end spaced apart from said end wall, the vent slot extending

In re Patent Application of
Ewers
Serial No. **10/681,617**
Filed **10/08/2003**

from said lug member inwardly toward said inner cavity through a sidewall of the body and through the plurality of threads so as to open into said inner cavity; and

a gasket having a circumference complementary to the periphery of said inner cavity, and positioned between said plurality of threads and said end wall abuttingly contacting said sidewall and said end wall.

20.(original) The combination of claim 19, wherein said at least one lug member has a base coextensive with the outer surface of said sidewall, two lateral walls, and an end wall.

21.(original) The combination of claim 19, wherein said at least one lug member has a base coextensive with the outer surface of said sidewall, two concavely arcuate lateral walls, and a convexly arcuate end wall.

22.(original) The combination of claim 19, wherein said vent slot is positioned extending along a central lengthwise dimension of said at least one lug member.

23.(original) The combination of claim 19, wherein said plurality of threads is cut along the vent opening to form a bevel having approximately a 45° angle to a center axis of said vent slot.

24.(original) The combination of claim 19, wherein an inner surface of said end wall includes a central concavity which extends to form a knob protruding from an exterior surface of said end wall.

25.(original) The combination of claim 24, wherein said knob is generally outwardly cylindrical and includes an arcuate groove extending along a lateral circumference.

26.(original) The combination of claim 25, further comprising a chain fastened around said arcuate groove.

27.(original) The combination of claim 19, wherein said end wall further comprises a shelf positioned peripherally along an inner surface of said end wall, the shelf being slightly raised above a central area of the inner surface of said end wall.

28.(original) The combination of claim 19, wherein said Gasket is circular, having an inner diameter, an outer diameter, and a generally rectangular cross-section.

29.(original) The combination of claim 28, wherein the generally rectangular cross-section includes a length lying along a radius of said Gasket.

30.(original) The combination of claim 29, wherein the generally rectangular cross-section includes a height sufficient for an upper surface of the Gasket to be positioned approximately level with the second end of said vent slot.

31.(original) A method of venting residual pressure from a fluid system having at least one capped threaded fitting in fluid connection with the system, the method comprising:

disposing on the fitting a vented cap having complementary threads by screwing the cap onto the fitting until the connection is tightened and the fitting is in contact with a cap gasket, the cap having a generally hollow cylindrical body

In re Patent Application of
Ewers
Serial No. **10/681,617**
Filed **10/08/2003**

having an inner cavity therein, an anterior opening including plurality of threads on an inside surface adjacent said anterior opening, a posterior end closed by an end wall, and a plurality of lugs extending outwardly from said body, each lug member of said plurality having a vent slot extending at least partly through the lengthwise interior extent of said lug member so that the vent slot has a first end beginning at said anterior opening and a second end spaced apart from said end wall, the vent slot extending from said lug member inwardly toward said inner cavity through a sidewall of the body and through the plurality of threads so as to open into said inner cavity, said cap being disposed with a gasket positioned between said plurality of threads and said end wall abuttingly contacting said sidewall and said end wall, the gasket having a circumference complementary to the periphery of said inner cavity; and

releasing residual fluid pressure after shut down of the system by sufficiently loosening the vented cap to break contact between the cap gasket and the fitting so that a fluid connection is established from the fitting into the plurality of vent slots in the cap lugs to therethrough release residual fluid pressure while keeping the vented cap sufficiently engaged with the fitting to remain thereon.

32.(original) A vented cap for a pressurized fluid conduit, said cap comprising a cap body having a sidewall defining a generally cylindrical inner cavity having a first end and a second end spaced apart therefrom, a mouth defined by a periphery of said sidewall at said first end and opening into said cavity, an end wall positioned at said second end so as to close said cavity, a plurality of threads extending along an inner surface of said sidewall and generally from said mouth toward said end wall, and at least one lug member extending outwardly from an outer surface of said sidewall and having a lengthwise extent positioned generally parallel to a central axis of said cavity, said at least one lug member having a vent extending along the interior extent of said lug member so that the vent has a first open end adjacent said mouth and a second open end extending through the plurality of threads adjacent said end wall.

33.(original) The vented cap of claim 32, further comprising a gasket having a circumference complementary to the periphery of said inner cavity, said gasket positioned between said plurality of threads and said end wall abuttingly contacting said sidewall and said end wall.

34.(original) A vented cap for a pressurized fluid conduit, said cap comprising a cap body having a sidewall defining a generally cylindrical inner cavity having a first end and a second end spaced apart therefrom, a mouth defined by a periphery of said sidewall at said first end and opening into said cavity, an end wall positioned at said second end so as to close said cavity, a plurality of threads extending along an inner surface of said sidewall and generally from said mouth toward said end wall, and at least one lug member extending outwardly from an outer surface of said sidewall and having a lengthwise extent positioned generally parallel to a central axis of said cavity, said at least one lug member having a vent with a first end open to the outside and a second end spaced apart from said first end, said second end being open to said inner cavity and being positioned relative to said cap's end wall so as to be prevented from having fluid communication with the pressurized fluid conduit by a gasket disposed abutting the end wall of the cap so as to seal the pressurized fluid conduit as long as the cap is tightly threadingly mounted thereon.

In re Patent Application of
Ewers
Serial No. **10/681,617**
Filed **10/08/2003**

35.(original) A vented cap comprising a cap body having a sidewall, a generally circular mouth defined by said sidewall, an end wall opposite from said mouth, a plurality of threads extending along an inner surface of said sidewall, at least one lug member extending outwardly from an outer surface of said sidewall, and a vent opening extending through said at least one lug member.

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